CLAIMS

WE CLAIM:

1. A method of assessing whether a human subject is susceptible to type 2 diabetes comprising the step of determining the allele in the genome of that subject of the SorCS1 or SorCS 3 gene.

2. A method of assessing whether a human subject is susceptible to type 2 diabetes comprising the step of analyzing the nucleic acid sequence of the subject in the SorCS 1 or SorCS 3 gene.

3. A method for determining whether a human being is a candidate for developing type 2 diabetes, the method comprising the steps of:

determining the sequence of the protein coding region of the SorCS 1 or SorCS 3 gene of the human being;

deducing the amino acid sequence encoded by the region sequenced; and

comparing the amino acid sequence to SEQ ID NO:2 or SEQ ID NO:4, respectively, wherein a difference observed indicates the human being as a candidate for developing type 2 diabetes.

4. A method for determining whether a human being is a candidate for developing type 2 diabetes, the method comprising the step of:

determining the mRNA or protein expression level of either SorCS 1 or SorCS 3 in the human being wherein the expression in comparison to normal range level of expression established by type 2 diabetes-free individuals indicates that the human being is a candidate for developing diabetes.

5. A method for identifying an agent that interacts with SORCS 1 protein, the method comprising the steps of:

exposing a SORCS 1 protein to a test agent; and

determining whether the test agent binds to the SORCS 1 protein.

6. The method of claim 5, wherein the SORCS 1 protein is from a human, a mouse or a rat.

7. A method for preventing or treating type 2 diabetes in a human being, the method comprising the step of administering neurotensin to the human being in an amount sufficient to prevent or treat type 2 diabetes.

8. A method for identifying a therapeutic agent, or analog thereof, which is useful for the treatment of type 2 diabetes and related diseases, the method comprising the steps of:

exposing a SORCS 1 protein to a test agent; and

determining whether the test agent modulates the biological activity of SORCS 1 protein.